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PROVIDER BULLETIN

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THIS ISSUE

Review Criteria for Thoracic Outlet Syndrome Surgery

TO:

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Purpose

This Provider Bulletin replaces PB 95-04 and becomes effective September 1, 2004.

The purpose of this Provider Bulletin is to notify providers of the update in CPT codes that require prior approval and utilization review (UR) for state fund claims. All inpatient or outpatient surgery for vascular or neurogenic TOS or for entrapment of the brachial plexus will require prior approval and UR. CPT codes that will require prior authorization and UR include, but are not limited to, the following codes:

21600	Partial excision of a rib
21615	Excision of first and/or cervical rib
21616	Excision of first and/or cervical rib with sympathectomy
21700	Division of scalenus anticus; without resection of cervical rib
21705	Division of scalenus anticus with resection of cervical rib
21899	Unlisted procedure of the neck or thorax
64708	Neuroplasty, major peripheral nerve, arm or leg
64713	Neuroplasty, brachial plexus

Surgery for TOS or Brachial Plexus Entrapment will require Utilization Review

The department's UR vendor will review requests for TOS surgery in accordance with the review criteria in this Provider Bulletin. The current UR vendor is Qualis Health, phone number is 1-800-541-2894, and fax number is 1-877-665-0383.

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Effective 9/1/04

Review Criteria for Thoracic Outlet Syndrome (TOS) Surgery

TYPE OF TOS	SUBJECTIVE	OBJECTIVE	IMAGING
VASCULAR TOS ARTERIAL	At least <u>three</u> of the following must be present in the affected upper extremity: A. Pain B. Swelling or heaviness C. Decreased temperature or change in color D. Paresthesias in the ulnar nerve distribution	At least <u>one</u> of the following: A. Pallor or coolness B. Gangrene of the digits in advanced cases	C. Abnormal arteriogram
.....			
VASCULAR TOS VENOUS	At least <u>three</u> of the following must be present in the affected upper extremity: A. Pain B. Swelling or heaviness C. Decreased temperature or change in color D. Paraesthesias in the ulnar nerve distribution	At least <u>two</u> of the following: A. Swelling of the arm, B. Venous engorgement C. Cyanosis	D. Abnormal venogram
.....			
NEUROGENIC TOS	In the affected upper extremity: A. Pain <i>and</i> B. Numbness or paresthesia in the ulnar nerve distribution	In the affected upper extremity, <u>all of the</u> following electrodiagnostic abnormalities must be found: A. Reduced amplitude median motor response <i>and</i> B. Reduced amplitude ulnar sensory response <i>and</i> C. Denervation in muscles innervated by lower trunk of the brachial plexus	
.....			

- *1 The clinical findings in TOS may be similar to those in carpal tunnel syndrome, ulnar neuropathy or cervical radiculopathy. A physician should consider these alternative diagnoses before requesting TOS surgery.
2. Most patients with TOS have cervical ribs.
3. The Department of Labor and Industries has recently concluded a retrospective study of outcomes of thoracic outlet surgery on patients with Labor and Industries claims. The results indicate that long-term outcomes after TOS surgery are worse than outcomes with medical management of TOS.

SEE NEXT PAGE FOR DETAILS OF CRITERIA

Approved by the Washington State Medical Association (WSMA) Industrial Insurance and Rehabilitation Committee, March 1995

Criteria For The Electrodiagnostic Diagnosis Of Unilateral Neurogenic Thoracic Outlet Syndrome (TOS)^{^^}

All 3 of the following criteria must be found in the affected limb:

1. Amplitude of median motor response is reduced
And
2. Amplitude of ulnar sensory response is reduced
And
3. Needle exam shows denervation in muscles innervated by lower trunk of brachial plexus.

Details Regarding the Above Noted Criteria:

Criterion #1

- a) Using standard surface electrodes with active pick up over the abductor pollicis brevis, the amplitude of the median motor response on the affected side should be less than 50% of that obtained on the unaffected side.

Criterion #2

- a) Using standard ring electrodes on the fifth digit, the ulnar sensory amplitude on the affected side should be less than 60% of the amplitude on the unaffected side.

Criterion #3

- a) Muscles innervated by the lower trunk of the brachial plexus include the abductor pollicis brevis, pronator quadratus, flexor pollicis longus, first dorsal interosseous, abductor digiti minimi, flexor carpi ulnaris, extensor pollicis brevis, and extensor indicis.
- b) EMG abnormalities in TOS are most commonly seen in median and ulnar innervated intrinsic muscles of the hand -- especially the abductor pollicis brevis.
- c) Positive waves and fibrillations may be found, but chronic denervation changes are more common -- that is, increased motor unit amplitude, increased motor unit duration, and decreased recruitment with rapid firing of motor units are activated.

Notes

The electromyographer should rule out neuropathic conditions that might mimic TOS, specifically cervical radiculopathy, carpal tunnel syndrome, ulnar neuropathy and polyneuropathy.

^{^^} Abstracted from Wilbourn A.J. American Association of Electromyography and Electrodiagnosis. Case Report #7: True Neurogenic Thoracic Outlet Syndrome. 1992.